In summary

- Most human cases of H5N1 Avian Influenza in other countries have come from extensive direct contact with infected domestic birds or their droppings.
- If you have concerns regarding sick birds on your farm you may contact either MDA or USDA.
- The detection of High Path H5N1 strain influenza in birds in the U.S. would not signal the start of a human pandemic.
- Properly prepared wild game and poultry cooked to an internal temperature of 165° F is safe to eat.

For more information

Animal Health
MDA website - **www.michigan.gov/mda**
DNR Website - **www.michigan.gov/dnr**
USDA website - **www.aphis.usda.gov**
Emerging Diseases
www.michigan.gov/emergingdiseases

Emergency Management
Food and Water in an Emergency -
www.fema.gov

MSU Extension-
www.msue.msu.edu/emergency

General flu information
www.michigan.gov/influenza
www.cdc.gov/flu/

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Who to contact

For information regarding Avian Influenza as it relates to wildlife, domestic animals or people, contact one of the agencies listed below:

People

Michigan Department of Community Health
Division of Communicable Diseases
P.O. Box 30195
Lansing, MI 48909
(517) 335-8165
Or contact your local county health department.

Wildlife

Michigan Department of Natural Resources
Wildlife Disease Laboratory
4125 Beaumont Road, Room 250
Lansing, MI 48910-8389
(517) 336-5030

U.S. Department of Agriculture
APHIS Wildlife Services
2803 Jolly Road, Suite 100
Okemos, MI 48864
(517) 336-1928

Domestic Poultry and Livestock

Michigan Department of Agriculture
Animal Industry Division
525 West Allegan
P.O. Box 30017
Lansing, MI 48909
(517) 373-1077

U.S. Department of Agriculture
APHIS, Veterinary Services
3001 Coolidge Road, Suite 325
East Lansing, MI 48823
(517) 324-5290

Michigan State University, DCPAH
P.O. Box 30076
Lansing, MI 48909-7576
(517) 353-5275

Michigan State University Extension
11 Agriculture Hall, MSU
East Lansing, MI 48824-1039
(517) 432-7696
Or contact your local county Extension office

Avian Influenza

Michigan's Preparation and Response

April 2006
Michigan Department of Agriculture
Michigan Department of Community Health
Michigan Department of Natural Resources
United States Department of Agriculture
Michigan State University

Michigan's preparation and response to Avian Influenza

Avian Influenza --the bird flu--is a disease caused by a virus that infects wild birds such as geese, ducks, swans and shorebirds, domestic poultry, and in rare cases, other animals and humans. This brochure provides information about Avian Influenza, what the state of Michigan is doing to prepare for the possible detection of the strain of Avian Influenza originally documented in Asian countries and what precautions the public should take.

The Michigan Departments of Agriculture (MDA), Natural Resources (DNR) and Community Health (MDCH), as well as the U.S. Department of Agriculture Veterinary Services (USDA, VS) and Wildlife Services (USDA, WS) and Michigan State University (MSU) are working together to conduct Avian Influenza surveillance and to monitor the health of poultry, livestock, wildlife and people in Michigan.

General information

Avian Influenza has been documented in domestic poultry and wild waterfowl at low levels in the United States for decades. Just as in people, birds commonly get the flu, too. In birds, most strains of the virus (identified with letters and numbers – for example H3N2) are mild (or Low Pathogenic) and cause only mild symptoms. Despite there being over 140 strains of Avian Influenza in birds, people are rarely infected.

The virus currently of global concern is a strain of H5N1 Avian Influenza originally documented in Asian countries. This strain is a Highly Pathogenic strain which causes severe illness and death in poultry. To date this High Path form of H5N1 Avian Influenza has not been found in the U.S. However, a Low Path strain of H5N1 was found on a Michigan poultry farm in 2002. At that time Michigan's State Veterinarian recommended the poultry flock be humanely destroyed as a safety precaution.

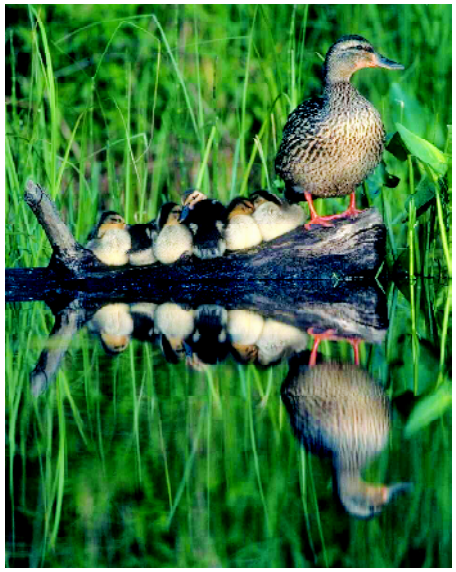
As of early April 2006, the H5N1 strain of global concern has not been detected in either birds or humans in the U.S. However, if the H5N1 strain is detected in the U.S. it does not mean that a human pandemic has begun, or will begin. For a pandemic to occur the virus must be easily transmitted from person to person. At this time the H5N1 Avian Influenza strain of concern does not have that ability.

The High Path H5N1 strain has been fatal to birds and has caused extreme illness in a number of people and animals in other countries. The infected people had close contact with sick or dead infected domestic poultry, including plucking feathers off infected dead birds, selling sick poultry in live bird markets, and sleeping in barns with sick birds where they were exposed to bird droppings. Mammals, including humans that were exposed to uncooked infected birds, also have become sick with Avian Influenza.

As of early April 2006, approximately 109 human deaths caused by High Path H5N1 Avian Influenza have been identified worldwide. Although the H5N1 strain may make people extremely sick and can even be fatal, there is no strong evidence the disease can be spread from person to person.

Unlike seasonal flu, which causes approximately 36,000 deaths each year in the U.S., Avian Influenza in people is more likely to be an occupational illness of those who have close contact with sick and dead poultry. In this country it is very rare for people in cities and towns to be exposed to sick live poultry, and the USDA inspection system prevents diseased animals from entering the food chain.

Included in this brochure is information that addresses the occupational safety precautions that hunters, small poultry flock owners and poultry workers should take.



How could Avian Influenza come to the United States?

The High Path H5N1 strain could reach the U.S. in a number of ways -- wild bird migration, smuggling of birds or poultry products, and travel by infected people. The disease is being monitored closely by local, state and federal agencies and the domestic poultry industry. These agencies are taking steps to prepare for and minimize the potential health, economic and conservation impacts of High Path H5N1, if it should be detected in the U.S. and Michigan.

What are we doing to prevent Avian Influenza?

The Centers for Disease Control and Prevention, Division of Global Migration and Quarantine (DGMQ):

The DGMQ operates a station at Detroit's Metro Airport where flights from foreign countries are monitored. U.S. Customs and Border Protection also monitors incoming passengers and luggage for potentially contaminated products and smuggled birds.

Federal and state bird import restrictions:

As a primary safeguard, USDA maintains trade restrictions on the importation of poultry and poultry products from H5N1-affected countries. All healthy, imported live birds must be quarantined for 30 days at a U.S. quarantine facility and tested for the Avian influenza virus before entering the country. Additionally, the U.S. has increased its monitoring of domestic commercial markets for smuggled poultry and poultry products.

In the event of an Avian Influenza outbreak in this country, it is normal practice to humanely destroy healthy domestic birds in a geographic area surrounding the infected birds. USDA may use bird vaccines to protect healthy birds as well.

Federal and State bird monitoring:

The MDA, DNR, U.S. Departments of Interior and Agriculture and MSU sample migratory waterfowl and domestic poultry for the H5N1 virus. The enhanced monitoring of live bird markets, commercial flocks, backyard flocks and migratory bird populations will provide an early warning to the agriculture, wildlife and public health officials.

Michigan's preparedness

Federal, state, and local agencies in Michigan have worked closely with poultry, livestock and wildlife officials, MSU experts and domestic poultry industry leaders for years to prevent the introduction and spread of High Path Avian Influenza in Michigan. These activities include *Surveillance and Response:*

Surveillance means monitoring for disease. The early detection and the rapid, accurate diagnosis of Avian Influenza sets the stage for the response activities that follow. These are accomplished by surveillance of wild waterfowl, shorebirds and domestic poultry populations to detect Avian Influenza through laboratory testing. If Avian Influenza is detected, response plans are in place to prevent further spread of disease.

Domestic poultry surveillance and response

In countries where the High Path H5N1 strain has infected domestic poultry flocks, industry and government agencies have killed several million domestic chickens, ducks and geese to prevent further spread.

The USDA has importation restrictions to prevent the introduction of Avian Influenza into the U.S. through domestic poultry. Additionally, the U.S. has increased its monitoring of domestic commercial markets for smuggled poultry and poultry products.

Commercial poultry production in the U.S. and Michigan includes strict biosecurity measures at the farm level to ensure safe and wholesome food products. The practice of raising chickens and turkeys indoors provides a healthy, safe, and controlled environment that minimizes the chances of spreading a variety of bird diseases including Avian Influenza.

Domestic poultry raised outdoors, often in small backyard flocks, have a much greater risk of being exposed to diseases like Avian Influenza which can be carried by wild birds. When wild birds and domestic poultry share water, feeding and living areas, the possibility for disease transmission from one to the other significantly increases.

Decreased appetite, severe depression, a drastic decline in egg production, swollen combs and wattles, hemorrhages on internal membrane surfaces and sudden deaths are all signs that a poultry flock may be infected with Avian Influenza. Laboratory testing is needed to confirm the disease.

If small poultry or domestic waterfowl flock owners detect any of the above signs in their birds, they should contact their private veterinary practitioner or MDA at (517) 373-1077. In the event of a confirmed case of Avian Influenza in Michigan, MDA will continue to conduct surveillance by testing animals and will notify private practice veterinarians and stakeholders of the disease. MDA also will provide expertise in the area of domestic animal disease control including testing, vaccination and euthanasia. MDA cooperates with MSU's Diagnostic Center for Population and Animal Health (DCPAH) for diagnostic services and will utilize the MDA Laboratory as appropriate. The department also will implement measures for disease control as indicated in the Avian Diseases Emergency Response Plan.

USDA Veterinary Services (USDA, VS) in Michigan provides expertise in the area of epidemiology, diagnostic laboratory support and testing when AI is suspected in poultry. The Michigan VS office also provides staff in the event large numbers of animals must be euthanized. In an emergency, the Michigan USDA, VS office may request a risk assessment from the USDA Centers for Epidemiology and Animal Health.

Wild waterfowl surveillance and response

Low Path Avian Influenza viruses have been found for decades in many bird species, but most often are found in migratory waterfowl such as ducks, geese, and swans. Susceptible birds can become infected with Avian Influenza virus when they have contact with nasal secretions or fecal material from infected birds or with areas contaminated by them.

The occurrence of low path strains of Avian Influenza in wild birds is seasonal, so the likelihood of detecting the virus by testing, and the potential for exposure, depends on the time of year. The highest rate of infection typically occurs in late summer in juvenile waterfowl, when they assemble for their first southward migration. The number decreases in the fall as the birds migrate south to their wintering grounds, and is lowest in the spring.

If Michigan citizens discover several (six or more) sick or dead waterfowl in one area they should call the DNR Wildlife Disease Laboratory at (517) 336-5030. If a single dead bird is discovered, either fill out the dead bird form at **www.michigan.gov/emergingdiseases**, or call a local DNR field office.

The DNR will conduct three types of wild bird surveillance:

- Examination of carcasses from die-offs affecting wild birds
- Sampling of live-caught wild birds
- Sampling of hunter-harvested wild birds.

USDA, WS cooperates with state agencies in surveillance activities when a disease that affects humans and livestock is found in wildlife. They may frighten away or exclude wild birds from areas of known infection to prevent disease transmission to wildlife. This office also provides staff for Avian Influenza control activities.

Human health surveillance and response

At present, Avian Influenza is a disease of birds and is not readily spread to humans. In rare cases, it can be spread from birds to people as a result of extensive direct contact with raw infected domestic poultry or poultry droppings. There have been no officially documented cases of human H5N1 disease resulting from contact with wild birds.

Concerns about public health relate to the potential for the virus to mutate, or change into a form that *could* spread easily from person to person. The U.S. Department of Health and Human Services (DHHS) is aggressively working with a team of federal, state and industry partners to ensure public health is protected.

The U.S. Centers for Disease Control and Prevention (CDC) is providing recommendations to public health departments in the U.S. for enhanced monitoring of all influenza viruses, especially H5N1. The guidance includes recommendations for detecting, diagnosing, and preventing the spread of the H5N1 virus. MDCH is following these national recommendations.

MDCH and local health departments currently conduct surveillance for seasonal and unusual influenza activity in humans. The department will work directly with emergency management and local public health officials to inform citizens and other stakeholders about the status of AI activity in the state and will provide laboratory diagnostic service for humans.

MDCH and local partners will provide information to the public, businesses, schools, and other stakeholders about how to prevent or slow down the spread of influenza. Public health also will be working very closely with health care providers to share the latest prevention and treatment recommendations for seasonal and unusual influenza, including the availability and use of vaccine and antivirals. People who have the potential to be exposed to Avian Influenza are advised to follow the CDC guidelines for personal protection equipment use. These guidelines can be found at www.cdc.gov . MDCH also serves as the liaison with DHHS and CDC.

***If* High Path Avian Influenza is ever confirmed in Michigan *and* you have been involved in collecting sick or dead birds:**

1. Watch for fever, cough, sore throat, muscle aches, trouble breathing or eye infections for seven to 10 days after being around sick birds or places where they have been.
2. If you feel sick immediately call your doctor or go to an emergency room. Tell them in advance you have been around sick birds at work, or while hunting, and you are feeling sick.
3. If you are sick, stay home until your health care provider indicates that you may go back to work.
4. If you are sick, stay away from other people. Wash your hands often to kill germs and cover your mouth when you sneeze or cough with some form of cloth, even your shirt sleeve. This will help keep germs from spreading through the air.

Practice effective food safety

If High Path Avian Influenza were detected in the U.S., the chance of infected poultry entering the human food chain would be extremely low. However, should this occur, **proper cooking kills this virus** just as cooking kills many other disease organisms. When handling food follow these food safety guidelines:

- Wash hands with warm water and soap for at least 20 seconds before and after handling food (this virus is killed with soap and water).
- Prevent cross-contamination by keeping raw meat, poultry, fish and their juices away from other foods.
- After cutting raw meats, wash cutting board, knife and counter tops with hot, soapy water.
- Sanitize cutting boards by using a solution of one (1) teaspoon chlorine bleach in one (1) quart of water.

Use a food thermometer to ensure food has reached the safe internal temperature—in all parts of the bird. USDA recommends poultry be cooked to an internal temperature of 165° F to kill foodborne germs that might be present, including the Avian Influenza virus.

What should I be doing?

An Avian Influenza outbreak does not imply that there will be a human outbreak, or a pandemic. However as part of your family emergency response plan each individual and family should know both the magnitude of what can happen during a large-scale disease outbreak and what actions can be taken to help lessen the impact on themselves and their community. To plan for a disease outbreak:

- Store a supply of water and food, it will be important for you to have extra supplies on hand. This can be useful in other types of emergencies, such as power outages, winter storms and disasters.
- Have nonprescription drugs and other health supplies on hand, including pain relievers, stomach remedies, cough and cold medicines, fluids with electrolytes and vitamins.
- Talk with family members and loved ones about how they would be cared for if they got sick, or what will be needed to care for them in your home.
- Volunteer with local groups to prepare and assist with emergency response.
- Get involved in your community as it works to prepare for disease outbreaks.

Practice good health habits that limit the spread of germs:

- Wash hands frequently with soap and water.
- Cover coughs and sneezes with tissues.
- Stay home from work and school if sick. Keep your children away from others if they are sick.
- Cook your food thoroughly.

Knowing the facts is the best way to prepare. Identify sources you can count on for reliable information. If a disease outbreak occurs, having accurate and reliable information will be critical. Look for information on the MDCH Web site: **www.michigan.gov/flu**

If you are traveling to countries where High Path Avian Influenza is present, be sure to familiarize yourself with the CDC precautions by visiting their website: **www.cdc.gov**

Handling waterfowl and game birds when hunting

As stated, the High Path H5N1 strain of Avian Influenza that originated in Asia is currently not found in the U.S. State and federal wildlife agencies have established an intensive surveillance program for H5N1. Should this virus appear in the U.S., spread of the disease from game birds to human, though unlikely, is possible through significant contact with fecal material and fluids when handling or dressing an infected bird. Hunters are encouraged to take precautions when handling and dressing birds, including the use of rubber gloves. For overall safety, all wild birds should be cooked to an internal temperature of 165° F.

As a precaution the U.S. Department of Interior's National Wildlife Health Center has issued the following guidelines for routine handling of wild birds:

- Do not handle birds that are obviously sick or birds found dead.
- Wear rubber or disposable latex gloves while handling and cleaning game, wash hands with soap and water or with alcohol-based hand products if the hands are not visibly soiled.
- Thoroughly clean knives, equipment and surfaces that come in contact with game.
- Do not eat, drink, or smoke while handling or cleaning birds.
- Cook all meat to an internal temperature of 165° F to kill any disease organisms and parasites.